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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,217	04/20/2001	Shu-Yi Yen	742433-09	9370

22204 7590 08/24/2004

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EXAMINER	
KADING, JOSHUA A	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/838,217	YEN ET AL.	
	Examiner	Art Unit	
	Joshua Kading	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-8 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-8 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 20 April 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1, 2, and 8 are objected to because of the following informalities:

Claim 1, line 7; and claim 2, lines 4 and 5 state "on LAN" or "of LAN". These should be changed to --on said LAN-- and --of said LAN-- respectively.

Claim 8, line 3 states, "said set of registers". This should be changed to --a set of registers--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonge, III (U.S. Patent 6,289,000 B1) in view of Merchant et al. (U.S. Patent 6,535,489).

Regarding claim 1, Yonge discloses "an apparatus for Physical Layer (PHY) signal control in local area network, comprising:

a first means for connecting said PHY signal control apparatus and a Media Access Layer means (figure 1, element 24), to enable data transmission between said apparatus and said MAC means (col. 4, lines 60-64 where the I/O bus 24 indicates the ability to transmit data between the devices);

a second means for controlling said first means to selectively transfer a general data on [said] LAN...to said MAC means (figure 2, elements 74 and 76 are used to control the information passing through the PHY device 22, element 74 is further described in col. 6, lines 12-17)."

However, Yonge lacks what Merchant discloses, the information sent to the MAC means is "warning data" (col. 17, lines 42-col. 18, lines 1-10 where the changing of the status register is equivalent to sending a "warning data" in that it is conveying that the configuration of the link is no longer the same as it was before, thus requiring attention if communication is to continue on the line; further since the PHY layer device register is updated it thus follows that the MAC layer register will update itself appropriately).

It would have been obvious to one with ordinary skill in the art at the time of invention to include the warning data for the purpose of determining if a link is no longer able to transmit or receive data. The motivation for determining the condition of a link is to be able to avoid sending data on that link so as not to lose any data (Merchant, col. 18, lines 66–col. 19, lines 1-8).

Regarding claim 2, Yonge and Merchant disclose the apparatus of claim 1. However, Yonge lacks what Merchant further discloses "a third means, said third means capable of storing said warning data (col. 17, lines 52-60 where the registers of the PHY and MAC are used to store transmission configuration data, including any warnings); a fourth means, said fourth means capable of recording a current transmission configuration of [said] LAN (col. 17, lines 65-67)..." Although Yonge lacks what Merchant discloses, Merchant also further lacks what Yonge further discloses, "a fifth means, said fifth means capable of handling general data on [said] LAN and relaying said general data to said MAC means by means of said first means and said second means (figure 2, element 52 where the transmission configuration component will contain information corresponding to the transmission information stored in the registers of Merchant)." It would have been obvious to one with ordinary skill in the art at the time of invention to have the third, fourth, and fifth means as part of the apparatus of claim 1 for the same reasons and motivation as in claim 1.

Regarding claim 3, Yonge and Merchant disclose the apparatus of claim 2. However, Merchant lacks what Yonge further discloses "said first means includes an interface (figure 2, element 74 acts as an interface to the first means 24)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the interface with the apparatus of claim 2 for the same reasons and motivation as in claim 2.

Regarding claim 4, Yonge and Merchant disclose the apparatus of claim 2. However, Merchant lacks what Yonge further discloses "said second means includes a state machine (figure 2, element 76 which functions as a state machine in that it responds to the current state of the system as read in col. 6, lines 32-35)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the state machine with the apparatus of claim 2 for the same reasons and motivation as in claim 2.

Regarding claim 6, Yonge and Merchant disclose the apparatus of claim 2. However, Yonge lacks what Merchant further discloses "said fourth means includes a register set (col. 17, lines 65-67)." It would have been obvious to one with ordinary skill in the art at the time of invention to have a register set with the fourth means for the same reasons and motivation as in claim 2.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yonge, III and Merchant et al. as applied to claim 2 above, and further in view of applicant's admitted prior art (AAPA).

Regarding claim 5, Yonge and Merchant disclose the apparatus of claim 2. However, Yonge and Merchant lack what AAPA discloses, "a destination address, said destination address is a broadcasting address (Specification, page 2, lines 16-18); a source address...(Specification, page 2, lines 21-22); an error checking data, said error checking data including 4 bytes of cyclic redundancy code (figure 1, element 13)." However, Yonge, Merchant, and AAPA explicitly lack "said source address including 6 all-zero bytes". Although Yonge, Merchant, and AAPA do not talk about 6 all-zero bytes in the source address, APPA does disclose the source address is represented by 6 bytes. Since addresses are used to represent a given location (or even situation such as the value of the destination address to indicate a broadcast situation) it would have been obvious to one with ordinary skill in the art at the time of invention to have the source address contain 6 all zero bytes as a way of representing a certain situation as a matter of design choice. It doesn't matter what value is used in the source address, as long as the rest of the system is aware of the meaning of that value. The motivation for using specific values to represent certain situations or locations is so that the system can have more functionality over other systems, for example broadcasting instead of just unicasting.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merchant et al.

Regarding claim 7, Merchant discloses "a method for an PHY signal control apparatus to provide a specific warning data to a MAC means in a LAN, said method comprising the steps of:

(a) checking a current external transmission configuration (col. 17, lines 42-47 where the CPU checks the current transmission configuration by comparing with the previous transmission configuration);

(c) if said external transmission configuration is different to the transmission configuration stored previously in said PHY signal control apparatus, then said PHY signal control apparatus transferring a specific warning data to said MAC means (col. 17, lines 47-col. 18, lines 1-10 where the MAC receives the warning by way of the changing the transmission configuration register of the MAC in response to the warning in the PHY device)."

However, Merchant does not directly disclose "(b) if said external transmission configuration is identical to the transmission configuration stored previously in said PHY signal control apparatus, then said PHY signal control apparatus transferring general communication data to said MAC means..." Although Merchant does not explicitly state that if there is no change in configuration that data is transmitted normally, it would have been obvious to one with ordinary skill in the art at the time of invention to infer this from Merchant. Specifically, col. 17, lines 47-52 of Merchant disclose that a "0" in the register

indicates no change in configuration. Since there is no change in configuration there is no need to stop transmitting or receiving data and thus it can be assumed this is what happens.

It would have been obvious to one with ordinary skill in the art at the time of invention to have data communicated as normal because there is no need update anything since there is no configuration change. The motivation for not changing anything is so that data communication is not interrupted unnecessarily.

Regarding claim 8, Merchant discloses the method of claim 7. Merchant further discloses "(c1) before transferring said warning data to said MAC means, updating the former transmission configuration stored in [a] set of registers of said PHY signal control apparatus to the current external transmission configuration (col. 17, lines 42-col. 18, lines 1-10 where the registers are changed to indicate the change in configuration); and (c2) after transferring said specific warning data to said MAC means...set said MAC means to current transmission configuration, then said MAC means will operate normally according to the transmission configuration of said PHY signal control apparatus (col. 18, lines 66–col. 19, lines 1-17 whereby handling the configuration change, the MAC can now operate in a normal manner by avoiding the down link)."

However, Merchant does not explicitly disclose that "a driver of said MAC means retrieves the transmission configuration stored in said set of registers of said PHY signal control apparatus". Although Merchant discloses the configuration being sent to the MAC, it would have been obvious to one with ordinary skill in the art at the time of

invention to have the MAC driver retrieve the configuration information as a matter of design choice. Having the configuration in formation is sent to the MAC achieves the same results as retrieving the configuration information by the MAC; i.e. the configuration information is updated in the MAC so that it can operate under the new configuration. The motivation for having the information retrieved instead of sent is purely a matter of design choice and depends on the system design.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (7571) 272-3079. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joshua Kading
Examiner
Art Unit 2661

KENNETH VANDERPUYE
PRIMARY EXAMINER

August 23, 2004